The E-Factor:
Advancing Women Entrepreneurs in the Digital Economy

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Introduction

With the rise of globalisation, technological innovation, diffusion of information via the Internet, and related changes in business values and beliefs, countries, regions, governments and institutions everywhere are facing changing conditions for competitive advantage (Pfeffer & Sutton, 2000). Globalisation allows companies of all sizes, even micro and small and medium size enterprises (SME) which were once unable to compete with larger firms, to participate in new markets and reduce costs. Deregulated markets allow for more competition as well as better product offering and prices for small businesses.

Today, with an economy enabled and driven by connectivity, a fundamental shift in business models is occurring whereby information, knowledge and relationships underpin competitive advantage. In order to compete in what some refer to as the Knowledge Economy or the Digital Economy, companies must use technology-mediated channels, create internal and external value, formulate technology convergent strategies, and organise resources around knowledge and relationships (Rayport & Jaworski, 2001). A recurring theme in the networked economy is one of a complex network of interaction, whereby emphasis on collaboration between firms and cooperation is placed as the key for new models of enterprise and innovation (Castells, 2000). As connectivity is conducive to linking stakeholders in networks, new structures are emerging in which networks and inter-firm collaboration play an increasingly important role (Gulati, Nohria, & Zaheer, 2000).

Connectivity and e-commerce constitute both a challenge and an opportunity for those of us in the connected world in a position to involve ourselves in the nature and the extent of information and communication technologies (ICT). Being a player in the Digital Economy requires an understanding of the benefits of e-business; the difference between e-commerce vs. e-business; changing business paradigms; and interactive markets, market communication and customisation. It also requires sound e-business planning, including an understanding of e-business and e-marketing strategies, e-competition, security and value-added. This in turn requires e-business training that will provide players with suitable solutions for their business environment, e.g., email, web presence, e-commerce, m-commerce or combination of enabling tools; how to keep up with a rapidly changing business environment; and how to achieve economies of scale.

Access permitting, the benefits of ICT are not restricted to any one group or gender. The gamut of areas in which ICT can put greater control in the hands of women is wide and continuously expanding, empowering them to participate in economic and social progress (Nath, 2001). There are, however, still a number of barriers that prevent women from enjoying and accruing the potential benefits of ICT. This paper explores issues surrounding women entrepreneurs and ICT.

Adoption of ICT and E-Business

There are few statistics on the adoption of ICT by women small business owners. Australia, for one, does not have gender disaggregated data on ICT adoption. The Australian Bureau of Statistics (ABS) does provide statistical estimates for most general indicators of the business environment and e-business adoption across all business types. The ABS also provides data regarding women ownership and management of businesses within industry classifications. However, data relating specifically to sales, revenues of business and e-business adoption by businesses owned by women is not available (Braun et al, 2005). As reported in the APEC report on the situation of women-owned business and e-business, of the APEC economies where data is available, data is based on small samples and its generalisability to all women-owned businesses in the economy is suspect. Canada and Mexico have high percentages of women using the internet (57% and 46% respectively). In Mexico, this is considerably higher than the percentage of total business using the Internet, which is only 7.9%, indicating the danger of a small, specialised sample (Wright, 2006).

One might think that the rapid development of ICT and the Internet as a communication, marketing and transaction channel would appeal to small business with clients, customers and suppliers, but (non-gender disaggregated) research indicates that most SME hesitate to invest their precious time and money in a rapidly changing e-commerce economy (Van Beveren & Thompson, 2002). Much of the research into the implications of the Internet for micro and small and medium size enterprises (SME) has focused on individual business barriers to information and communication technologies (ICT) and e-business adoption. Such research has shown that SME tend to be time and resource-poor, with their size being their main disadvantage vis-à-vis ICT adoption. Other barriers that have been identified include being located in peripheral regions where the ICT infrastructure, especially broadband, is either inadequate or prohibitively expensive; and the education and professional background of small business operators (Walczuch, Van Braven, & Lundgren, 2000). Studies further cite lack of resources to manage web-related tasks and lack of relevant skills as the main e-commerce uptake deterrents. Government intervention designed to overcome such barriers and facilitate adoption of ICT has not markedly increased the uptake of e-business by SME and the purported benefits of ICT and e-business have not been fully realised with SME have yet to move beyond email (Braun, 2003).

Advancing Women in the Digital Economy

From the APEC study on the situation of women-owned business and e-business (Wright, 2006) it has become evident that there has not been any attention paid to addressing adoption of ICT by women entrepreneurs nor to women's other needs in e-business policies. The Australian Government, for example, does not have specific policies, departments, sections or offices for the advancement of e-business by women. It does have an Office for Women, which is dedicated to women's issues and provides high level (policy and other) advice on Women's Issues; advises on legislative issues relating to women; provides the principal focus on consultation between the women's sector and government; and represents government at national and international forums on women's issues. This office does, however, not address or liaise on e-business issues and ICT policies, resulting in a women's ICT policy vacuum. Indeed, Australian government policies to assist women in business use e-business and ICT are in the infant stages of development, making Australia a non-enabling environment for women e-business entrepreneurs.

It is proposed in this paper that women entrepreneurship, and in particular e-entrepreneurship can only flourish within an enabling environment. To advance women's entrepreneurship and e-capability, a partnership will need to be forged between the private sector and a forward-thinking public sector. Policy initiatives should build on or compliment local conditions or antecedents such as access to broadband infrastructure, industry associations; research and training; focal point/mentors to help identify opportunities and determine local conditions, while policy management should include policy intervention that befit local conditions. Together, local antecedents and policy management create dynamic effects which lead to a point of e-capability (Figure 1).

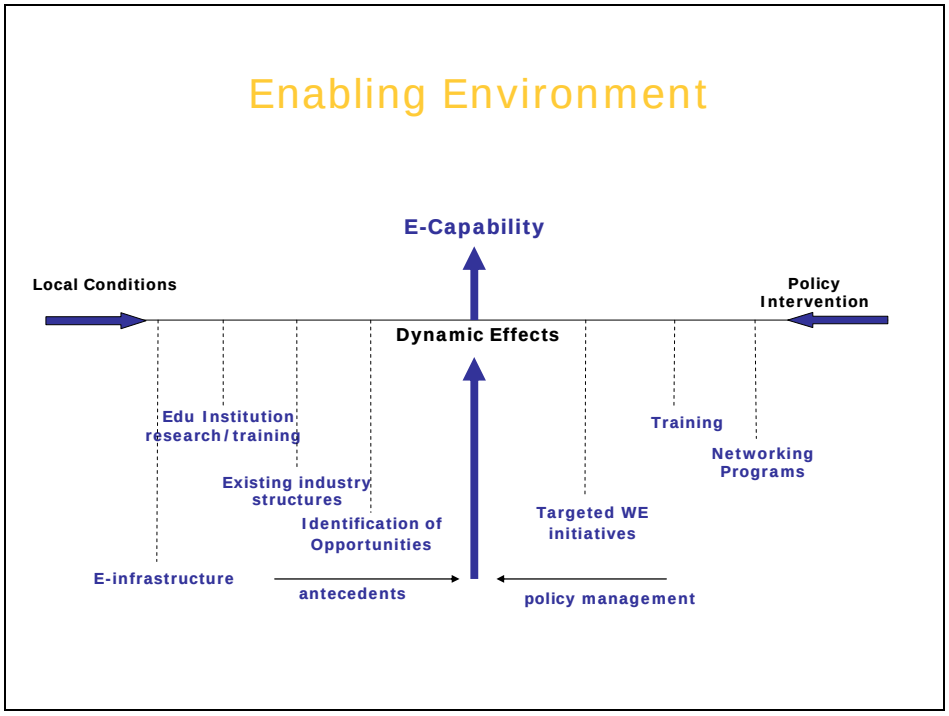

Figure 1
E-Capability

It is also proposed in this paper that women entrepreneurs' e-skill base requires more than e-business capacity building. We have known for some time that women are concentrated in micro and small enterprises. Many are sole proprietors and many more than men are in home-based businesses. Extensive research on women entrepreneurs has shown that women face numerous obstacles (e.g., access to finance; juggling family care and business) when venturing into business. Yet no data is available on whether this is true for e-business or not, but past experience tells us it is likely to be so (Wright, 2006). While there is a need for digital empowerment as a partnership between the private sector and the public sector as well as a long-term empowerment strategy to provide access and encourage use of technology, a coordinated and holistic approach to capacity building is needed, with adaptation to local conditions and the local economic context.

A good example of a coordinated policy for the development of women entrepreneurs comes from Atlantic Canada[1] under the leadership of the regional development agency, the Atlantic Canada Opportunities Agency (ACOA). ACOA established an Entrepreneurship Development Directorate in 1990 with the objective of 'renewing the entrepreneurial spirit of the region in partnership with Atlantic Canadians.' Women were identified as one of the target groups for tailored activity. The major tools employed fit within the framework of 1) promotion, 2) financing, 3) training and mentoring, 4) networking, 5) coordinated policy action (Figure 2). The policy framework was implemented by ACOA in partnership with the Business Development Bank of Canada, the Entrepreneurship and Small Business Office of Industry Canada, the Association of Atlantic Women Business Owners (and similar networking organizations), provincial governments, banking institutions, universities and economic development organisations. Today this model is used as a women's entrepreneurship assessment tool in developing economies (St Onge and Stevenson, 2006).

[1] Atlantic Canada refers to Canada's four most eastern provinces bordering on the Atlantic Canada. These include Newfoundland, Nova Scotia, New Brunswick and Prince Edward Island. The Region has a population of approximately 2.5 million.

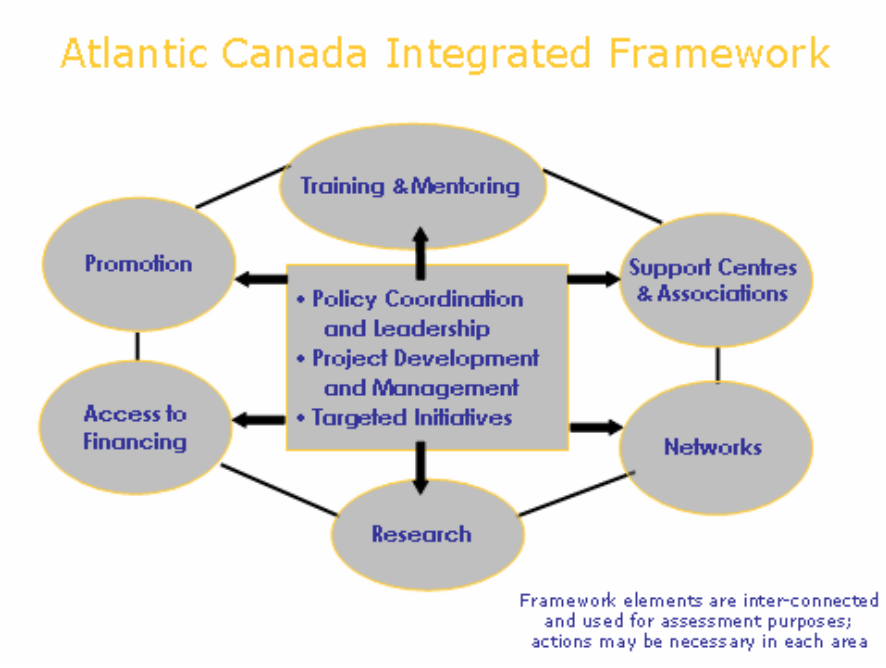

Figure 2
Assessment Framework

The Canadian framework elements are inter-connected and actions may be required in each area to get the desired capacity building results. Specific e-business adoption strategies, taking into consideration the incremental nature of SME e-business adoption, should be targeted initiatives within this framework.

Incremental Learning

Current approach to ICT adoption interventions fail to take into account the incremental nature of the SME e-business adoption processes. ICT encompasses a series of separate yet interrelated components: electronic mail (email), the Internet, the web, and e-commerce, which can be adopted in a variety of business settings. It is hence suggested that ICT cannot be considered as a single technological innovation, but rather as a series of (process) innovations (Walczuch et al, 2000). Thus ICT can be seen as a ”technology cluster”, one or more interrelated elements of technology that are adopted in context, with one innovation influencing an individual’s perception of the next innovation.

We have known for some time that e-commerce novices need substantial encouragement and support to make them willing to take the e-business plunge, but it is especially the soft innovation issues, such as awareness, capacity and resource building SME need help with. For many SME proprietors ICT is a language they still do not understand and e-commerce a product for which they have no use. SME hence need substantial encouragement to move into, get comfortable and take mental, physical and virtual possession of the ICT domain (Braun & Harman, 2004). It takes time before SME

are ready to drop the ‘e’ out of e-business and implement e-business models as part of their daily business routines.

To help small business owners articulate, value and meet their evolving e-business needs, it is suggested in this paper that ICT adoption strategies should focus on facilitating ongoing skills development and integration of e-business technologies with existing small business processes. Underpinning ICT adoption with an appropriate learning model and embedded support networks, has significant implications for SME e-business value creation and realising the benefits of publicly funded ICT adoption programs.

Embracing ICT tools and e-business related technologies is a complex and phase-based process. While email had indeed become the standard communication for most SME, many have not yet progressed to the e-commerce phase, suggesting that adopting e-business technologies is an evolutionary process that requires the negotiation of a journey that involves continuous learning and change.

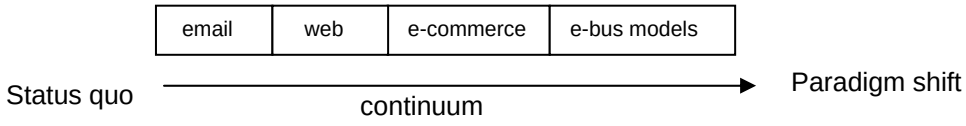

Figure 3
ICT adoption continuum

Adoption of the entire cluster of ICT technologies may hence be viewed as a linear process along an adoption continuum (Figure 3). After adopting email, the web is the second step for adoption consideration, e-commerce the third step, potentially followed by adoption of a complete e-business model at which point we may speak of or an ICT paradigm shift.

Earl’s (2000) e-business framework applies to large companies, but it is suggested that this framework would be useful to consider in terms of incremental learning processes for e-business adoption by small firms and by women e-entrepreneurs in particular. In incorporating the various e-business adoption needs, six suggested learning phases that would be relevant to SME include:

1. external communications phase - SME connectivity & basic website development
2. internal communications phases – SME information and communication capacity building
3. e-commerce strategy phase (B2C and B2B awareness and developing strategies to accommodate 24/7 business operations)
4. e-business processes phase - synchronising business processes to match customers' expectations in the new economy
5. e-enterprise operational phase – value adding through marketing, customer service, transaction, supply chain, delivery, etc
6. adoption of a dynamic e-business model or transformation phase – dropping the ‘e’ out of e-business and remaining flexible and open to change

While ICT/e-business adoption levels will vary from firm to firm and locale to locale, in the main learning issues revolve around facilitating 'entry-level' or low-level e-commerce involvement first, followed by longer-term strategic planning and integration into overall business activities. Thus, these learning phases should be rolled out in a just-in-time fashion, e.g., taking into consideration the level of e-capability particular firms, industries or even regions are ready to embrace.

But simply adopting an incremental learning program is not enough. In an environment of disconnected networks, there is not only a need to help women small business owners articulate, value and meet their evolving e-business needs, but a need to support their business and entrepreneurship processes as a whole.

Conclusion

In courting women entrepreneurs to participate in new communication and distribution channels such as the web, the need to assist and support small business to incrementally adopt ICT/e-business tools has been identified. In addition it has been suggested that women entrepreneurs in the digital economy need assistance with a variety of issues, not only e-business capability and an integrated policy approach is desirable to remove barriers to e-business uptake. Thus, holistic and women-focused policy initiatives are needed to build strategic options for women in the digital economy

Such a policy approach is a replicable process across economies, as long as recognition is given to the fact that women are not a homogeneous group; local conditions, opportunities and market forces will differ; and focal point(s) are needed to assess and support women entrepreneurs, as well as to assist with the identification of complimentary public and private actions.

Provided these preconditions are met, women-focused policy measures will enable locale-specific solutions to allow for affordable e-entrepreneurship and just-in-time training structures and solutions; the facilitation and support of existing infrastructure and resources; and the promotion of best practice. Underpinned by ongoing research as well as formative and summative program evaluation measures, targeted initiatives will provide win-win solutions for all involved.

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